

A New Species of Clearwing Moth from Southcentral Texas

(Lepidoptera: Sesiidae)

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The southern region of Texas, vegetationally referred to by Correll and Johnston (1970) as the Rio Grande Plains, or as the South Texas Plains or Tamaulipan Brushlands by others, is characterized as open prairie with a mixed growth of small trees and shrubs, *Prosopis* and *Acacia* species predominating. The Rio Grande Plains are bordered to the north by the Edwards Plateau and to the east by the Gulf Prairies and Marshes. Uvalde, Texas, the area from which the species described here was collected, is located about 20 miles south of the southern margin of the Plateau.

The Rio Grande Plains extend into northeastern Mexico, where this floral zone is referred to by Leopold (1950) as the Mesquite-Grassland Zone. Here it is surrounded by the Chihuahuan Desert to the west and northwest, by Thorn Forest to the southeast, north of Tampico, and to the south by a belt of Tropical Deciduous Forest. Within the western portions of the Mesquite-Grasslands at elevations from about 1200 m to over 3000 m, are scattered Pine-Oak Forests.

Certain recent collections of sesiids, particularly from near Linares, Nuevo Leon, Mexico made by J. A. Powell and J. A. Chemsak, University of California, Berkeley, and T. Friedlander, University of Texas, Austin; and collections made from Uvalde, Texas by T. D. Eichlin and M. S. Wasbauer, provide evidence that there is a degree of continuity of the sesiid fauna throughout the Rio Grande Plains-Mesquite Grasslands vegetational zone.

The clearwing moth fauna of Texas generally, and for the southern portion of the state particularly, is very poorly known. In light of the statements above, the southern region of Texas is important to the systematic and biogeographic study of the Sesiidae. We might expect, for example, that the species described below will eventually be shown to occur in northeastern Mexico.

***Carmenta welchellorum*, new species**

(Figs. 1, 2)

Male (figs. 1, 2): Antenna slightly clavate, tufted with scales apically, blue-black, ciliate ventrally. Proboscis well developed. Labial palpus smooth ventrally, blue-black dorsally and apically, pale yellow ventrally and basally. Head with vertex blue-black, front

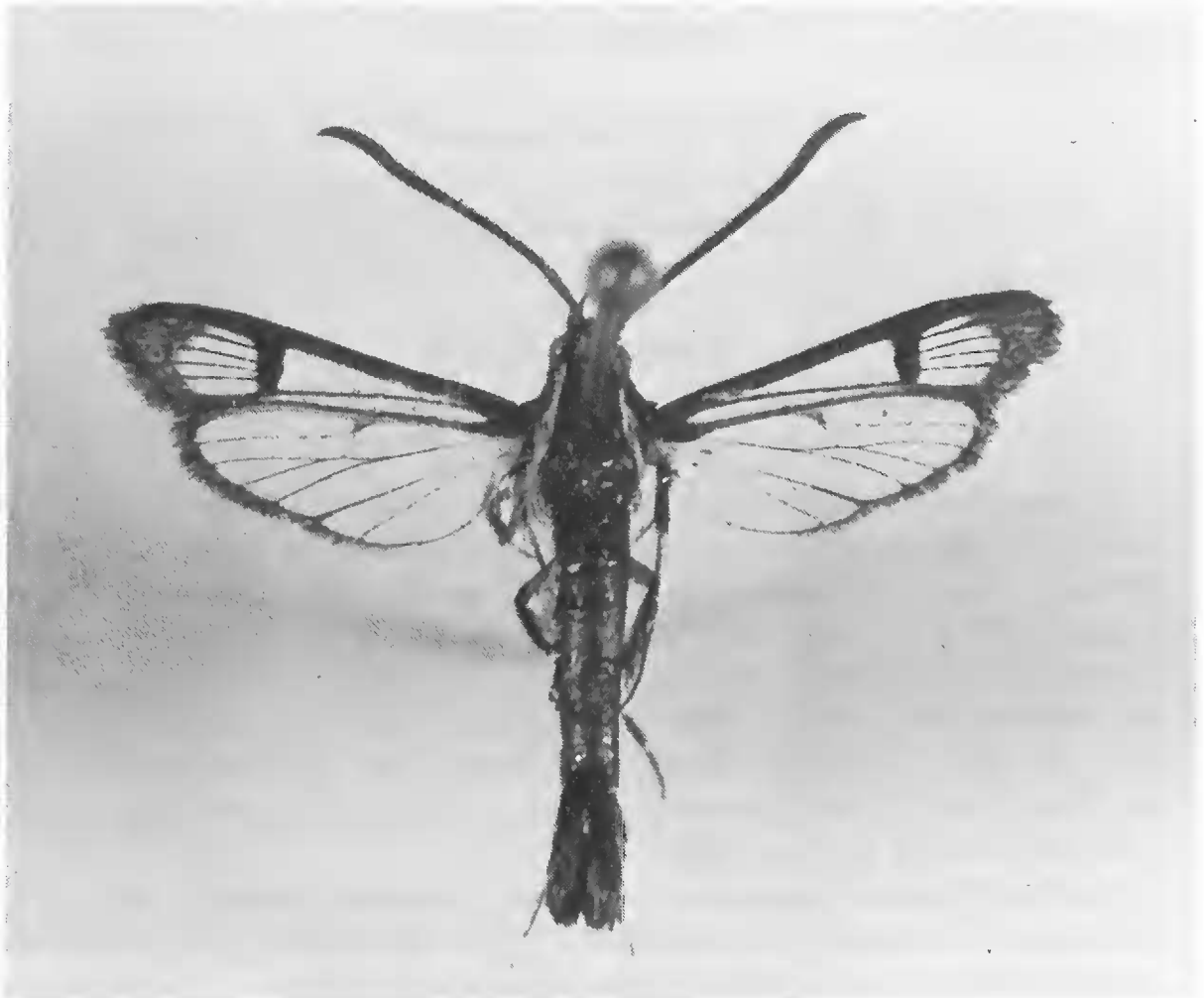


Figure 1. *Carmenta welchelorum*; Male Holotype.

blue-black, occipital fringe pale yellow dorsally, blue-black laterally. Thorax blue-black, with subdorsal yellow stripe over wing base, large yellow patch laterally beneath wing. Abdomen blue-black, with bluish iridescence, narrow pale yellow band laterally on segments 1, 2 and 4, anal tuft rounded, tipped laterally with pale yellow to white. Legs blue-black, pale yellow to white mesally, laterally on margin of forecoxa, on tibiae near spurs, and around joints of tarsal segments. Forewing mostly hyaline, with margins, veins and discal spot blue-black, lightly powdered pale yellow on margins between veins and on veins just distad of discal spot, ventrally with more extensive yellow powdering. Hindwing hyaline, with very narrow margins, fringe and minute discal spot blue-black, ventrally with yellow on costal margin. Male genitalia as in figure 2. Wing length, 8-10 mm.

Female: Unknown.

Host: Unknown.

Distribution: Currently known only from type-locality, Speir Ranch, 3 miles northwest of Uvalde, Uvalde County, Texas.

Types (all deposited in the NMNH): Male, Texas, Uvalde County, Speir Ranch, 3 mi. N.W. Uvalde, V-5-77, Eichlin and Wasbauer, malaise trap, pure Z,Z-ODDA, 1200-1330 CDT, (USNM type No. 75325). Paratypes, 7 Males, same data as holotype with the following exceptions: 2 specimens with V-4-77; 1 specimen with V-7-77 (no time of capture given); 2 specimens with V-6-77, 1400-1730 CDT, one of these with Genitalia Slide By M. R. Papp, CDA #299.

This species was collected in a malaise trap (flight trap), baited in the center with a piece of rubber band impregnated with pure Z,Z



Figure 2. *Carmenta welchelorum*; ventral view of male genitalia (left valva removed).

isomer of 3,13-octadecadien-1-ol acetate (Z,Z-ODDA), a major component of the sex pheromone systems of various clearwing moths. The malaise trap with pheromone has proved to be a very useful tool for capturing clearwing moths where species' populations are apparently at very low densities.

This is the third North American species discovered with the aid of sex pheromones (Duckworth and Eichlin, 1977, in press).

Carmenta welchellorum superficially resembles the viburnum borers, *Synanthedon viburni* Engelhardt and *S. fatifera* Hodges, neither of which are known from Texas, but the structures of the male genitalia clearly show *welchellorum* to be a species of *Carmenta*. No North American *Carmenta* have color patterns similar to this species.

It is our pleasure to name this species of *Carmenta* for Sally and Richard Welchel, who extended many kindnesses and gracious hospitality to Eichlin and Wasbauer. The Welchels permitted and encouraged them to utilize the relatively undisturbed acreages on their ranch for studying some of the insect fauna typical of this region of Texas.

Acknowledgments

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Literature Cited

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